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EPA'S BRISTOL BAY WATERSHED ASSESSMENT: A FACTUAL REVIEW OF A HYPOTHETICAL SCENARIO

Thursday, August 1, 2013

House of Representatives,

Subcommittee on Oversight

Committee on Science and Technology

Washington, D.C.

The Subcommittee met, pursuant to call, at 1:04 p.m., in Room 2318 of the Rayburn House Office Building, Hon. Paul Broun [Chairman of the Subcommittee] presiding.

Chairman BROUN. The Subcommittee on Oversight will come to order.

Good afternoon, everyone. In front of you are the packets containing the written testimony, biographies, and Truth in Testimony disclosures for today's witnesses. I now recognize myself for 5 minutes for an opening statement.

The title of today's hearing is, ''EPA's Bristol Bay Watershed Assessment: A Factual Review of a Hypothetical Scenario.''

I would like to extend a particularly warm welcome to our witnesses and thank you all for joining us here today, and really appreciate your coming and testifying before the Committee.

Last year, the U.S. Environmental Protection Agency released a draft watershed assessment of the Bristol Bay area in Alaska at the request of several Alaskan tribes and organizations concerned about the potential of mining activity in the region. This assessment, which by some estimates has cost taxpayers a minimum of $2.4 million, has undergone a peer review process and was re-released earlier this year as a second draft. However, EPA has not finalized the assessment, nor has it specified the ultimate purpose of the document. One concern--not denied by EPA--is that the assessment may be the basis of a preemptive veto where the agency would prohibit a mining company from even applying for

mine permits. It is important to note that as of this point, no mining permits have been filed in Bristol Bay. That means that EPA's watershed assessment is based on hypothetical mining scenarios, and according to one mining supporter, ''it is a fantasy for the government to say here is a mine plan.''

Further, one of our witnesses today, Dr. Kavanaugh, a member of the National Academy of Engineering, states that EPA's assessment ''exaggerates the probability of failures, relies on worst-case scenarios to support a qualitative judgment on the potential impacts of these failures, does not adequately consider modern engineering, construction, operations and maintenance practices, and thus provides an unrealistic and unscientific assessment of the potential impacts of the hypothetical mining project.''

I find that analysis troubling. A prospective decision of such magnitude by the EPA should be based on the best possible science, a point underscored in EPA's own Peer Review Handbook which states, and I quote, ''Science is the foundation that supports all of our work here at EPA. Strong, independent science is of paramount importance to our environmental policies. The quality of science that underlies our regulations is vital to the credibility of EPA's decisions.''

A preemptive veto by EPA would set a dangerous precedent, and could have a chilling effect on similar

projects throughout the Nation. Investors would be wary of funding projects if they believed that a federal agency could just say no at any time to a company permit prior to even applications being made. Let me emphasize that I am not an advocate for or against the development of the Pebble mine, in spite of what some people have claimed and charged. I understand the argument of mine proponents--that they be granted due process and allowed to make their case through existing law, which includes the Clean Water Act, the National Environmental Policy Act, as well as the Environmental Impact Statement process, which would address the specific issues that are unique to this part of Alaska and exclusive to this mine proposal.

You all may also know that I am a long-term lifetime member of Trout Unlimited. I am an avid hunter and a fisherman, and I have been to Alaska many times. You can come to my office and you will see some critters that I was able to gather there. I, too, understand the concerns of the anti-mine people regarding the value of this inimitable and pristine environment. Let me assure these folks: I care more about protecting that environment than any nonprofit organizations pushing a social agenda.

To me, the question at hand comes down to one of due process. This country was founded under the notion that citizens must be protected from tyrannical overreach, and I

believe it is unconscionable for the Administration, any Administration, to deny U.S. citizens their day in court. In a similar vein, I would consider a preemptive denial by the EPA equivalent to denying the mining companies their day in court, having judged them guilty instead of presumed innocent. Even The Washington Post, hardly regarded as a pro-mining mouthpiece, concluded in a recent editorial that regarding the mining companies, ''All they want, they say, is a fair and thorough evaluation of their claims. That is reasonable.''

That is reasonable to me too, and I look forward to hearing all sides of our witnesses' testimonies today.

[The statement of Mr. Broun follows:]

********** INSERT 1 **********

Chairman BROUN. And before I turn to the gentleman, my friend, Dan Maffei from New York, I will ask unanimous consent to enter for the record letters from various groups interested in our hearing, which have been shared with members of the minority. Hearing no objection, so ordered.

[The information follows:]

********** COMMITTEE INSERT **********

Chairman BROUN. I now recognize the ranking member, my friend, the gentleman from New York, Mr. Dan Maffei, for an opening statement.

Mr. MAFFEI. I want to thank the chairman.

My district in upstate New York has actually a unique connection to Alaska. It was the home to William H. Seward, who resided in Auburn, New York. Seward served as a Republican Governor, U.S. Senator and Secretary of State under Presidents Lincoln and Johnson, but Seward was most notably responsible for the purchase of Alaska from Russia in 1867. I won't tell you for how much. It was a bargain. At the time, the Alaska purchase was unpopular. It was actually known as Seward's Folly. Later in life, Seward was asked to name his greatest achievement, and he said, ''The purchase of Alaska, but it will take the people a generation to find out.''

It is hard for me to look at the proposal to place a mine in the watershed feeding area of Bristol Bay and not consider what future generations might think of us. On the one hand is the prospect of great wealth from exploiting natural resources resulting from mining efforts. That will last a few decades, perhaps a generation, and then the mining company will be gone, potentially leaving behind a huge hole in the Earth and billions of tons of acid mine waste. Even if the company can do what so far no mining company has ever

done in a wet environment and a dig a massive open pit mine that results in no leaks, no accidents, no pollution, who can guarantee that the massive amount of waste left behind in the tailings dam will not leach out or that the dam itself will not fail?

In 2010, a tailings dam holding mining waste collapsed due to heavy rain releasing toxic sludge, flooding nearby towns, killing 10 and injuring 120. In 1998 in France, a tailing dam collapsed, releasing sulfur, zinc, copper, iron and lead into nearby farmland. A study of the incident estimated that about 5,000 jobs were lost in the dam's failure and aftermath. These are just a few examples of the potential failures that could occur in Bristol Bay.

On the other hand, we have the returning wealth of salmon. They feed the earth in one of the most pristine locations in the world. They feed the people of the region, the last truly sustainable salmon-based culture left in the United States. Through the efforts of commercial fishermen, we too all get a chance to share in that bounty. The salmon of Bristol Bay who spawn in the rivers there are a sustained resource that if we do not destroy them will be there for as long as we can see into the future. And although the area does compete with my beloved upstate New York for fishermen, it is a wonderful place to go fish.

Bristol Bay's clean water economy supports one of

Alaska's most natural and bountiful resources--the salmon--and will yield economic returns and generate revenue for far beyond the short-term economic impact of mining, and that will support jobs today, tomorrow and in future generations, whereas mining and potentially its harmful environmental impacts will eliminate those future jobs supported by the fishing industry. If you hold these two prospects in the balance and weigh them in a scale for what is best for future generations, the question is very simple and the answer very clear: do we act for ourselves and then regret it after a generation, or do we embrace the sustained wealth of nature that returns every year for our use as long as people live on the Earth?

Now, I do want to respect the chairman's process points, and they are well taken, and I do not dispute his positive motives in this matter, but I do want to make just a few other points. I want to remind the members that EPA has begun their risk assessment in response to local pressure for the EPA to intervene. EPA was asked to take up the 404(c) process, which under the Clean Water Act gives EPA the power to protect water quality by establishing standards that can virtually veto development. EPA might be chided for taking on science-based watershed assessment rather than moving immediately to 404(c) but I think the agency was trying to show everyone involved that they were willing to listen and

study the issue thoroughly before acting.

The draft assessment is solid science that demonstrates hardrock mining cannot coexist side by side with salmon without harm to the salmon, to the fishing and sportsmen economy, and to the native communities. Claims that some magical technology can make all this work out have been made many times and rarely does technology work the way it is promised. Mining is an inherently destructive and dirty business, and technology cannot make it clean and harmless. I certainly agree, we need mining, and I am not an opponent of mining, but I think that we have to be honest with ourselves about where such projects can work and where they simply don't make sense.

Finally, I believe the EPA should complete their assessment and then promptly move to take up 404(c) that gives everyone certainty that Bristol Bay and the surrounding rivers and lakes will remain pristine. If the EPA's 404(c) amounts to a preemptive veto of mining, then at least it will free up the mining companies and capital to turn to more promising locations for ore. A contemporary of Seward described him as ''one of those spirits who sometimes go ahead of public opinion instead of tamely following its footprints. I hope members of this Committee will be mindful of these words and of the example of William Seward as we explore the issues surrounding the development of the Pebble

mine, and I yield back the remaining 3 seconds of my time.

[The statement of Mr. Maffei follows:]

********** INSERT 2 **********

Mr. MAFFEI. Mr. Chairman, I also have a unanimous consent request. I have--

Chairman BROUN. Go ahead. The gentleman is recognized.

Mr. MAFFEI. I have a request that letters that I have already shared with the majority be attached to my statement. These are ones that we have already shared.

Chairman BROUN. Without objection, so ordered.

[The information follows:]

********** COMMITTEE INSERTS **********

Chairman BROUN. The chairman notes the presence of my friend, Suzanne Bonamici, and Ms. Bonamici, do you want to participate? We need a unanimous consent request that you participate as if you are a member of the Committee, if you would like.

Ms. BONAMICI. Thank you, Mr. Chairman. I request unanimous consent that I be permitted to participate in the Subcommittee hearing. I am a member of the full Committee but not of this particular Subcommittee.

Chairman BROUN. Hearing no objection, so ordered, and thanks for joining us.

If there are members who wish to submit additional opening statements, your statements will be added to the record at this point.

Now, at this time I would like to introduce our panel of witnesses. Our first witness is Mr. Lowell Rothschild, Senior Counsel at Bracewell and Giulianti. Is that how you pronounce that?

Mr. ROTHSCHILD. Giuliani.

Chairman BROUN. Giuliani. Well, whatever. I am a southerner and I can't pronounce words like that. I don't know Italian.

Our second witness is Dr. Michael Kavanaugh, Senior Principal at Geosyntec Consultants and a Member of the National Academy of Engineering. Our third witness is Mr.

Wayne Nastri, Co-president of E4 Strategic Solutions, and former Regional Administrator of EPA Region 9. Our final witness is Mr. Daniel McGroarty. Is that correct?

Mr. MCGROARTY. Yes.

Chairman BROUN. Okay, President of the American Resources Policy Network. We welcome all of you all.

As our witnesses should know, spoken testimony is limited to 5 minutes each, after which members of the Committee will have 5 minutes each to ask you questions. Your written testimony will be included in the record of this hearing.

It is the practice of this Subcommittee on Oversight to receive testimony under oath. Do any of you all have an objection to taking an oath of truthfulness? Let the record show that all of the witnesses indicated that they do not mind taking the oath. If you would please stand? Raise your right hand. Do you solemnly swear or affirm to tell the whole truth and nothing but the truth, so help you God? You may be seated. Let the record reflect that all the witnesses participating have taken the oath.

I now recognize our first witness, Mr. Rothschild, for 5 minutes.

TESTIMONY OF LOWELL ROTHSCHILD, SENIOR COUNSEL, BRACEWELL AND GIULIANI LLP; MICHAEL KAVANAUGH, SENIOR PRINCIPAL, GEOSYNTEC CONSULTANTS, AND MEMBER, NATIONAL ACADEMY OF ENGINEERING; WAYNE NASTRI, CO-PRESIDENT, E4 STRATEGIC SOLUTIONS, AND FORMER REGIONAL ADMINISTRATOR, U.S. EPA REGION 9; AND DANIEL MCGROARTY, PRESIDENT, AMERICAN RESOURCES POLICY NETWORK

TESTIMONY OF LOWELL ROTHSCHILD

Mr. ROTHSCHILD. Chairman Broun, Ranking Member Maffei, members of the Committee, thank you very much for inviting me to testify today. My name is Lowell Rothschild, and I am Senior Counsel at the law firm of Bracewell and Giuliani. I have practiced exclusively in the area of environmental law for almost 20 years with my primary focus on the laws affecting land development like those related to wetlands, endangered species and environmental review, like NEPA. I have extensive experience in the permitting and litigation of major projects under these laws, and I am also the co-author of the Environmental Law Institute's Wetland Deskbook.

The Committee has asked me to testify today on the NEPA Environmental Impact Statement process as it relates to mining activity and how that process compares to assessments EPA undertakes under Clean Water Act sections 104(a) and (b) like the one for Bristol Bay. My view, as I discuss in

greater detail in my written testimony, is twofold. EPA's Bristol Bay study is both more general and more limited than an EIS would be. It covers far fewer subjects than would be analyzed in an EIS and lacks the detail needed to fully understand the impacts of an eventual project, even for the resource impacts it does examine. As a result, EPA's assessment is not an adequate substitute for an EIS, and even for the resources it does analyze, its impact assessment is less informed and therefore less useful than the analysis which would occur under a project-specific EIS.

The reason for these concludes relates to both the intent of the study and to its timing and the permitting process. EPA, as you all have said, has selected three hypothetical mining scenarios and analyzed the direct impacts which they then would cause on salmon in the Bristol Bay watershed and its sub-watersheds. It also analyzes a few of the indirect impacts that would result from those salmon impacts. This approach is intentionally more limited than an EIS would be. A typical EIS for a large mining project analyzes impacts to approximately 20 different resources including strictly natural environmental ones like air, noise, groundwater and endangered species impacts as well as human environmental ones like economic, socioeconomic and environmental justice impacts. In contrast, the assessment is specifically limited to analyzing a subset of direct

wildlife impacts--those to salmon species--along with several of the indirect impacts that result from those impacts to salmon. Thus, the assessment isn't intended to be and it is not a substitute for an EIS.

The assessment's second limitation relates to its timing in the process. Since it is being undertaken before an application has been submitted, it is not able to utilize the important project-specific information which would be generated for the application. As a result, even for the impacts it does analyze, the assessment's analysis isn't as useful as that which would be undertaken in an eventual EIS. That is because to comply with the wetland permitting laws, a permit applicant must submit an application that identifies the practicable measures it will take to avoid, minimize and mitigate the project's impacts to wetlands. These measures are very difficult to identify in the abstract. They often involve small modifications to a project, even though they can result in significant decreases in impacts. But these modifications cannot be identified until you understand the on-the-ground resources to a high degree of detail. For example, one possible minimization measure would be moving the footprint of the wetland so that the wetland impacts are--the wetlands impacted are lower quality than those originally planned. To do this requires an assessment of the quality and the specific location of the wetlands in the

project area. This wetland assessment is something an applicant will do before it submits its application but only once the applicant has the specific information can it provide the avoidance, minimization and mitigation alternatives, and this is just one example of minimization--moving the project footprint--and only for one resource--wetlands. Other types of similar measures can be proposed both for wetlands and for the dozen or so major resources analyzed in the EIS. These types of detailed facts have not been developed for the Bristol Bay assessment, not for wetlands or for other resources. As a result, detailed avoidance and minimization modifications do not appear to be a part of the Bristol Bay assessment. Depending on the nature of such modifications that are included in the project application, an eventual EIS impact assessment could be quite different from EPA's current assessments.

I should also note that once the permit application process begins, EPA will have significant statutory rights under both NEPA and the wetland permitting laws, which will allow it to provide extensive input to the process and to affect its ultimate outcome. Until then, the assessment is too limited to be an adequate substitute for an EIS and too general to provide specific information about the impacts of any eventual mining project, even for the resources it has analyzed.

I look forward to answering any questions you may have. Thank you very much.

[The statement of Mr. Rothschild follows:]

********** INSERT 3 **********

Chairman BROUN. Thank you, Mr. Rothschild.

Now, Dr. Kavanaugh, you are recognized for 5 minutes.

TESTIMONY OF MICHAEL KAVANAUGH

Mr. KAVANAUGH. Mr. Chairman and members of the committee, thank you for the opportunity to speak at this hearing today. My name is Michael Kavanaugh. I am a Senior Principal with the firm of Geosyntec Consultants, an independent midsized U.S. consulting, engineering and geoscience firm.

Geosyntec was retained by Northern Dynasty to conduct an independent, impartial review of the scientific and engineering credibility of the 2012-2013 draft EPA Bristol Bay watershed assessment reports. I am a registered professional engineer in California and a board-certified environmental engineer with 40 years of consulting engineering practice in several technical areas relevant to an assessment of the potential environmental impacts of mining projects. I have a Ph.D. in civil environmental engineering from U.S. Berkeley, and in 1998 I was elected into the National Academy of Engineering. I have served on many independent peer-review panels and I currently serve on the Report Review Committee of the National Academies that oversees the peer-review process for all National Academy

reports. I was the principal in charge of Geosyntec's technical reviews of the assessment reports. Selected Geosyntec experts under my direction focus primarily on an evaluation of the scientific and engineering credibility of the failure scenarios selected by EPA for tailing storage facilities, or TSFs, water collection and treatment systems, pipelines, roads and culverts and the appropriateness of environmental impact analyses conducted by EPA for their failure scenarios for a hypothetical mine.

Both assessment reports fail to meet widely accepted quality and peer-review standards that must be satisfied to produce a credible scientific and engineering assessment. The reports significantly exaggerate both the probability of failures of engineering mining components and the environmental consequences of the failure scenarios. In fact, the 2013 assessment essentially assumes that all engineering components of the hypothetical mine will ultimately fail and then proceeds to assess more or less qualitative the impacts of these failure scenarios. This risk analysis is flawed because it gives equal weight to all failure scenarios including worst-case scenarios. EPA has assumed failure scenarios for some of the engineered components that are of such low probability that to assess the consequences only provides an alarmist portrait of a hypothetical mining scenario that could never be permitted in

Alaska. By failing to properly consider modern engineering and design mitigation methods that would be required for an acceptable permit application and that would both reduce the probability of system failures as well as mitigating the consequences of potential failures, the assessment lacks credibility as a useful risk analysis.

Several examples of our concerns include the following. The assessment estimates failure probabilities of TSFs based on case studies of 135 failed dams from around the world, many of which are older, poorly designed and unregulated. This database is irrelevant to a modern TSF. The assessment uses a TSF failure scenario based on overtopping, a failure mode that can be easily avoided by proper design of sufficient capacity and freeboard to manage a probable maximal precipitation event. The assessment assumes that easily repairable breakdowns in water and wastewater treatment processing equipment will result in long-term discharges of untreated wastewater, a situation that would violate permit requirements and would be easily addressed with standard mitigation measures.

The assessment contains inaccurate calculations that significantly overestimate consequences of hypothetical system failures such as a worst-case pipeline failure scenario that significantly overstates the potential volume of discharge released to a creek. Finally, the assessment

reflects a general lack of consideration of engineering and design mitigation measures for a modern mine all systems would be designed with appropriate safety factors, meeting permit requirements and design to minimize the consequences of potential failure events.

EPA traditionally sets a high bar for the quality of scientific documents considered to be highly influential scientific assessments, quote, unquote, as outlined in their Peer Review Handbook. Unfortunately, they have only partially followed their own guidance on conducting the peer review process for the 2013 assessment, failing to provide the degree of transparency required for such an important document.

Having served myself on several EPA peer-review panels on EPA's Science Advisory Board for Water and the ORD's Board of Scientific Counselors, I am fully aware of the high caliber of scientific efforts that EPA scientists have achieved in the past. It is thus discouraging to see the many limitations on their reliability and credibility of the 2013 assessment, and as a consequence, it is our opinion that the 2013 assessment fails to meet scientific standards that would permit the assessment to be used to inform future decisions on mining projects in the Bristol Bay watershed.

Thank you for your attention, and I welcome any questions.

[The statement of Mr. Kavanaugh follows:]

********** INSERT 4 **********

Chairman BROUN. Thank you, Dr. Kavanaugh.

And now, Mr. Nastri, you are recognized for 5 minutes.

TESTIMONY OF WAYNE NASTRI

Mr. NASTRI. Thank you, Mr. Chairman, and thank you, Ranking Member Maffei, for inviting me here to testify before you.

My name is Wayne Nastri, and I am the President of E4 Strategic Solutions, and previously I served as Regional Administrator for U.S. EPA Region 9 during the entire George W. Bush Administration.

I am testifying on my own behalf today, but I wish to note that I currently consult with the Bristol Bay Native Corporation and formerly consulted with Trout Unlimited on Clean Water Act issues.

In my written testimony, I reviewed EPA's Bristol Bay watershed assessment, and I found its conclusions are sound, and if anything, conservative, and that is further supported by an independent letter signed by 300 scientists that were supportive of EPA's process.

I would like to focus on just a few main points this afternoon. First, it is important to note that EPA was requested to take action in Bristol Bay by Alaskans who sought assistance on an issue that threatens their

sustainable economy, their jobs, their culture and their ability to live in the areas they have for thousands of years, and we are very fortunate today to have two village elders, Tommy Tilton and Bobby Andrew, in the audience. All of this is based on the incredible wild salmon resource of Bristol Bay. Nine federally recognized tribes, the Bristol Bay Native Corporation, the commercial and sport fishing industries and others petitioned EPA to initiate a 404(c) action. These groups, based on information derived from PLP filings that describe the location, the quality and the type of ore, understood quickly the threat that large-scale hardrock mining poses to Bristol Bay.

Instead of initiating 404(c) action, EPA sought to better understand the region's salmon resources and potential threats by performing an ecological risk assessment. And during its review, EPA identified what many in the region have known for years, and that is, economically viable mining of the Pebble deposit would result in one of the largest mines in the world, and in fact, be larger than all other mines in Alaska combined, and you can actually see this in the visual in front of you.

The basis of EPA's mining analysis is based on Northern Dynasty Minerals' and owner of the Pebble Partnership own documents and submissions to the investment community and to the SEC. It is also admitted as part of the record, and I

have a copy of that plan right here today.

These submittals, as described in the larger report, describe mines that could be more than 2,000 feet deep and 2 miles wide, require the construction of tailings reservoirs that hold as much as 10 billion tons of potentially acid-generated tailings, and all of this would be at the headwaters of one of the most valuable commercial and sport fisheries, provides half of the world's wild red salmon, accounts for nearly 14,000 jobs and hundreds of millions of dollars of economic activity according to EPA's conservative estimates. Northern Dynasty described the mining scenarios detailed in this report, and I quote, ''as economically viable, technically feasible and permittable.'' Again, the details I described are drawn directly from that 575-page report, which is far from the hypothetical or fantasy claim that we have heard before.

With regards to authority to conduct the assessment, EPA clearly has it under section 104(a), (b), and importantly, the support of this assessment is astounding. I am sorry. This is not the appropriate visual. But nearly 75 percent of all commenters supporting the assessment and 95 percent of commenters from Bristol Bay support that assessment, and I thought that the visual--there it is. In my experience, and looking forward, EPA needs to finalize its watershed assessment and address the original request for 404(c)

action.

The uniform complaint that I heard as a regional administrator from project proponents on 404(c) matters was, why didn't EPA get involved more upfront in the very project instead of waiting at the very end and delaying what they saw as much investment and time. So in that light, I believe it is wholly appropriate for the Federal Government to make clear upfront what its expectations are of permit applicants, especially for projects of the magnitude that we are discussing today. And I believe EPA should, at a minimum, use its Clean Water Act authority to restrict any 404 discharge to meet the following performance standards which are well founded in EPA and Army Corps practice, and they are: no discharge of fill materials to wild salmon in spawning and rearing habitat, no discharge of toxic material to waters of the United States, and no discharge of fill materials that would require treatment in perpetuity.

EPA has adhered to strict scientific standards in preparing the watershed assessment and undergone extensive outreach to ensure that the documents can inform future decisions by policymakers. The watershed assessment identifies significant adverse impacts to the fishery and is a key trigger for 404(c) action. EPA has the opportunity to provide clarity and certainty to those who live and work in the Bristol Bay region by initiating such action.

Thank you, and I look forward to your questions.

[The statement of Mr. Nastri follows:]

********** INSERT 5 **********

Chairman BROUN. Thank you, Mr. Nastri.

Now Mr. McGroarty, you are recognized for 5 minutes.

TESTIMONY OF DANIEL MCGROARTY

Mr. MCGROARTY. Dr. Broun, Ranking Member Maffei, members of the Committee, thank you for the opportunity to testify today. I am Dan McGroarty, President of the American Resources Policy Network, an organization dedicated to exploring the importance of U.S. resource development and the dangers of foreign resource dependence.

I am formerly Director and Officer of U.S. Rare Earths and President of Carmot Strategic, an issues management firm. I also want to share with the Committee that since early 2013, ARPN has been asked to participate on a volunteer basis in a series of metal-specific sessions convened by the DoD related to the mandated National Defense Stockpile Review.

The Pebble deposit, subject of the EPA assessment, is the largest potential copper mine in the United States. America's lack of this critical metal has been noted in a DoD report as causing ''a significant weapon system delay.'' Pebble also has potential for the recovery of other metal: molybdenum, used as an alloy in gun barrels of many times, uranium, used in high-performance jet fighters, and selenium tellurium, used in solar panels that could not only lead the

green revolution but provide a portable power source for U.S. troops.

As a matter of public policy, Pebble should be treated no differently than any other potential resource project under the federal permitting process established by the National Environmental Policy Act--NEPA. EPA's Bristol Bay watershed assessment prior to Pebble seeking a single permit creates a chilling effect on investment in U.S. resource extraction. A preemptive permit denial based on the assessment could deprive America of reliable sources of critical metals responsibly extracted under American regulations. In my view, every issue raised in the assessment could be reviewed within the existing NEPA process. There is no issue that requires a new pre-permitting process with the power to prevent a proposed project from entering NEPA.

In terms of the substance of the watershed assessment, a key underlying study used by EPA is the Earthworks-funded study, Kuipers Maest 2006. The global water and environmental management firm, Schlumberger, has conducted an analysis of this study on behalf of the Northwest Mining Association. The results are troubling.

First, Schlumberger could not replicate the hydrological data presented in the Kuipers Maest study, a fundamental tenet of sound scientific research. Second, Schlumberger

found a backward bias as the study drew on a preponderance--their word--of case studies taken from mines that operated before the modern regulatory era. Does it constitute sound science to argue against a proposed mine based on what happened at other mines operated to other standards 20, 30, 40 years ago? Would we use such a backward biased yardstick to justify or judge the safety of a new airplane, a new car, a new medicine?

I will turn now from substance to sourcing, serious questions concerning the impartiality of experts relied upon by EPA, once again, the subject of concern as worked on by Ann Maest and Stratus Consulting. Many of us know the Chevron case in Ecuador where plaintiffs were awarded an $18 billion judgment. In response, Chevron brought racketeering claims against members of the plaintiffs' team, including Maest and Stratus, arguing that they manipulated data to show contamination where none existed. How did they know this? The plaintiffs' team invited a film crew to make a documentary generating hours of outtakes that were revealed in the discovery process. Here is one example.

[Video.]

The subscript said, ''Facts do not exist. Facts are created.'' That is the lawyer who directed the research. There is laughter that follows that from Ann Maest, the scientist who conducted the Ecuador study and subsequently

submitted sworn statements in federal court that renounced all scientific findings--that is a quote--in their report to settle claims against her. Now, the work of that very same scientist is cited 11 times in the EPA assessment. To be clear, I do not know whether the work used in EPA's assessment will prove to show issues similar to the Ecuador studies the author disavowed but that question needs to be examined impartially and independently. Otherwise EPA's reliance on that work done by this scientist or her firm puts the assessment under a cloud.

In closing, there is a quote I would like to share. ''NEPA is democratic at its core. In many cases, NEPA gives citizens their only opportunity to voice concerns about a project impact on their community, and because informed public engagement often produces ideas, information, even solutions that the government might otherwise overlook, NEPA leads to better decisions, better outcomes for everyone. The NEPA process has saved money, time, lives, historical sites, endangered species, public lands, and because of NEPA, we are guaranteed a voice.'' That quote is from the website of the Natural Resources Defense Council. They love NEPA, just not this time and not this project.

If we allow this precedent, if the EPA uses the assessment to deny Pebble access to the NEPA process, there will be many mines and projects that don't get built, many

metals will be forced to import many times from nations that wish us harm. We have a process in place to determine whether a mine should or shouldn't be built. We should follow that process and let science guide us. Thank you. I look forward to your questions.

[The statement of Mr. McGroarty follows:]

********** INSERT 6 **********

Chairman BROUN. I want to thank all the witnesses for your testimony, reminding members that Committee rules limit questioning to 5 minutes. The chair at this point will open the first round of questions, and the chair recognizes himself for 5 minutes.

Dr. Kavanaugh, is it possible to have a scientifically sound watershed assessment using a hypothetical mining scenario in the absence of a submitted permit?

Mr. KAVANAUGH. No, I don't think it is, Mr. Chairman. I think that there is a serious constraint on undertaking a risk analysis on the basis of a hypothetical scenario. That doesn't meet the standards for an ecological risk assessment. It doesn't meet the standards for an Environmental Impact Statement, and it is essentially a hypothetical risk analysis. So it is inherently speculative, in my opinion, particularly in the context of identifying worst-case scenarios without attaching a probability of occurrence to those worst-case scenarios.

Chairman BROUN. Very good. Thank you.

Mr. Rothschild, typically who pays for an Environmental Impact Statement under the National Environmental Policy Act for projects requiring dredge and fill permits?

Mr. ROTHSCHILD. Mr. Chair, those permits are always paid for by the project applicant. The Corps has guidance documents which say that while the consultants are directed

by the Army Corps, they are paid for by the project applicant.

Chairman BROUN. Okay, but not by taxpayers?

Mr. ROTHSCHILD. Not by taxpayers.

Chairman BROUN. Okay. And generally speaking, how does that payment mechanism compare to the one involving agency watershed assessments such as NEPA document under discussion today?

Mr. ROTHSCHILD. The NEPA document is paid by the agency, by the taxpayers.

Chairman BROUN. The EPA document?

Mr. ROTHSCHILD. Yes, the EPA document.

Chairman BROUN. I said NEPA, but I meant EPA.

Mr. ROTHSCHILD. Yes, the 104(a).

Chairman BROUN. Okay. Now, we have heard testimony today from Mr. McGroarty that there are no issues addressed in EPA's watershed assessment that could not be raised and reviewed within the regular permitting process. Is there anything unique in a watershed assessment that would not be addressed in an Environmental Impact Statement under NEPA? Please give me a yes or no answer, starting with Mr. Rothschild.

Mr. ROTHSCHILD. No.

Mr. KAVANAUGH. No, I don't think so.

Chairman BROUN. Mr. Nastri?

Mr. NASTRI. I am considering your question because the--

Chairman BROUN. Please turn on your microphone.

Mr. NASTRI. Thank you. I was considering your question because the watershed assessment addresses the 404 issue.

Chairman BROUN. Well, the question was yes or no. Is there anything that--anything unique to the watershed assessment that would not be addressed in an Environmental--in an EIS under NEPA?

Mr. NASTRI. I am not aware at this time that would not be addressed.

Chairman BROUN. So the answer is no. Is that correct?

Mr. NASTRI. I am not aware of it, sir.

Chairman BROUN. Okay. As far as you know, it is no then. Okay. Then I will come back to you. You conclude your written testimony by stating your support for preemptive action by EPA to veto the Pebble mine using its authority under Section 404(c) of the Clean Water Act. Setting aside the question of EPA's authority to do so, can you explain as a former Regional Administrator for EPA how is such an action fair to people who have invested hundreds of millions of dollars collecting information so that they can define a mine and identify scientific data to show how they might propose to meet the standards in our environmental laws?

Mr. NASTRI. Well, it is very fair to project

proponents, and as I said in my testimony, oftentimes what we wanted to hear--what project proponents wanted to hear was early parameters by which they could develop their project. They wanted certainty and they wanted that certainty before they invested time and the millions of dollars that are often associated by going through the EIS process.

Chairman BROUN. Well, absolutely, but they didn't ask for a hypothetical mining scenario here.

Let me follow up with a yes or no question. Would allowing the Pebble project to present a plan to go through the NEPA permitting process result in any environmental harm?

Mr. NASTRI. Would it result in environmental--yes, it would, and--

Chairman BROUN. Wait a minute. Let me ask the question again.

Mr. NASTRI. Sure.

Chairman BROUN. Would allowing the Pebble project to present a plan, just to present a plan to go through the NEPA permitting process result in any environmental harm? Your answer is yes to that?

Mr. NASTRI. My answer is yes because of a delay that is going on and the uncertainty, and that uncertainty causes lack of investment.

Chairman BROUN. How is it going to cause environmental harm, though?

Mr. NASTRI. Well, it causes environmental harm by not allowing other projects to go through that could provide greater benefit, so you are looking at lost opportunities, sir.

Chairman BROUN. Mr. McGroarty, in your testimony, you mention copper in connection to the green revolution. What do you mean by that?

Mr. MCGROARTY. When we look at the major--Mr. Chairman, when we look at the major uses of copper in green technology, it is a constant presence. Wind power, for instance, a single industrial wind turbine uses approximately--just one--3 to 3-1/2 tons of copper for one wind turbine. Solar photovoltaic arrays, the newest technology for that uses an alloy or a metals blend called CIGS, C for copper, I for indium, G for gallium and S for selenium, 95 percent of which selenium comes from copper. So CIGS coming and going, copper is essential for photovoltaic arrays. Geothermal, drawing power from the Earth, the power is brought to the surface via copper coils. And then finally, whether it is solar or wind or geothermal, if we want to bring that power to the grid so that consumers can access it--renewable energy, which I support and which my organization supports--that comes through copper cable, at least in part through copper cable. So at every presence, I think what we need to look at is the green revolution is very dependent on metals and minerals

beneath it.

Chairman BROUN. Thank you, Mr. McGroarty.

My time is expired. Mr. Maffei, you are recognized for 5 minutes.

Mr. MAFFEI. I thank the chairman.

Mr. McGroarty, I too am concerned about the veracity of the scientific assessment of Ann Maest, but how many overall citations were there in the EPA draft report--draft assessment?

Mr. MCGROARTY. To her studies or her--

Mr. MAFFEI. No, how many overall to any--

Mr. MCGROARTY. I don't know.

Mr. MAFFEI. The answer is 1,390, and you said there were 11 times she was cited. That is some three-quarters of a percent. Do you think that if we can show that on the American Resources Policy Network's sourcing that three-quarters of a percent of your sources have been debunked, that we should ignore everything else that your organization says?

Mr. MCGROARTY. Let me respond in terms of that. EPA itself seems to indicate some concern about the Kuipers-Maest study because they subjected it to a kind of a quasi-peer review, so they did select it out.

Mr. MAFFEI. So they took care of that problem, at least in terms of the peer review. They did take care of that

problem.

You mentioned that we should let science guide us. Are you a scientist, sir?

Mr. MCGROARTY. I am not.

Mr. MAFFEI. Are you an engineer?

Mr. MCGROARTY. No.

Mr. MAFFEI. Are you an attorney with expertise about EPA procedures?

Mr. MCGROARTY. No, I am a policy analyst.

Mr. MAFFEI. Okay. You know, actually I admire your background. It is very similar to my own--journalism, communications--but I don't understand why you have any expertise to speak on this matter. Do you want to illuminate me on that?

Mr. MCGROARTY. Sure. My interest in this issue and involvement in this issue dates back. I served in government, two presidential appointments to the Department of Defense in the Reagan Administration, Secretary Weinberg, Secretary Carlucci, and then later went to the White House with George Herbert Walker Bush. I was responsible--

Mr. MAFFEI. You are an expert in politics, a political expert. Again, I have respect for your profession. I just don't understand what you are adding in terms of the scientific assessment that you yourself say should guide us.

Mr. MAFFEI. At that time, I was--one of the issues, of

course, the Soviet Union was the concern for strategic metals access. Nowadays it is China. The Cold War is over. And I was responsible for the statements on national security, many foreign affairs issues and defense policy, both at DoD, where this issue was critical and important, and at the White House.

Mr. MAFFEI. All right. My--

Mr. MCGROARTY. The genesis of my interest and involvement dates back to that.

Mr. MAFFEI. So you are concerned about the strategic effect if we don't have enough of these metals? I do understand that.

You did point out about a chilling effect on mining, and I would like to ask Mr. Nastri, in regards to the chairman's question and your answer, are you concerned about environmental impact because of a chilling effect if the continued--you know, the mining companies continue to say they are going to ask for a permit and don't? Is that why there is an environmental damage here? And if not, do you want to clarify, you know, or elaborate your answer to the chairman's question about that?

Mr. NASTRI. Sure. The real issue here is uncertainty and the impact that uncertainty causes, and I think Senator Mikulski said it well when she said in a letter to Northern Dynasty and the Pebble Partnership that there is frustration,

there is anxiety, and all this because of the uncertainty, and the uncertainty actually prevents a lot of investment to take place. We spoke to many organizations that said they would love to invest by creating jobs, by creating new processing facilities but with the uncertainty that is there, they are not going to do anything. You also have a number of people that want to invest in the fishing industry--buy new boats, buy new nets. They took have an uncertainty. And so what happens is, you have what I would argue is ongoing degradation because there is paralysis, and so that was the manner in which I was referencing.

Mr. MAFFEI. So whichever way we go, we are better off making the decision now than continuing to postpone it if it is a clear decision?

Mr. NASTRI. Absolutely. I think it is much better to provide that certainty, and as I described before, I believe that EPA could proceed under a set of 404 restrictions. The restrictions would provide the guidelines for companies to move forward. It would actually improve whatever it is they decided to do by letting them know what they have to do.

Mr. MAFFEI. One criticism of the EPA that I think is shared by Dr. Kavanaugh, if I read his writings correctly, is that the assessment doesn't take into account new technologies that might minimize the risk to the environment. Mr. Nastri, is that a possibility, that there could be new

technologies the EPA simply can't take into account?

Mr. NASTRI. Well, having worked at EPA for a number of years, I can tell you, they have mining engineers, they have people that worked in the mining industry. They are quite familiar with mining in general. And when I look at the documentation that has been provided by the partnership, Pebble Partnership's own companies, they describe in detail mining plans. They talk about two types of operations: open pit and underground. There is really not a lot of variation that you are going to see other than the actual size in the technology. And from that perspective, the real question I think that people need to wonder about is, this is the resource of the world's greatest salmon fishery. Over 40 percent of red salmon supply comes from this fishery. Can you imagine the uproar that would be caused if new, unfounded or unproven technology were applied in some area like this, which is so globally significant, and something went wrong? Is this the area where you would actually try to put in new technology without having the absolute certainty that it is going to be failsafe? This is not an area that you experiment with.

Mr. MAFFEI. Okay. Thank you, and thank all the witnesses.

Chairman BROUN. The gentleman's time is expired. Now Mr. Peters, you are recognized for 5 minutes.

Mr. PETERS. Thank you, Mr. Chairman. I just had a simple question because I think we are talking past it a little bit. Is there anyone representing the companies here with an interest in the mines?

Mr. KAVANAUGH. I am representing Northern Dynasty.

Mr. PETERS. Okay. So is there a plan to submit a permit with an EIS in the future?

Mr. KAVANAUGH. I am not familiar with the precise scheduling or any activities that they are undertaking. I was retained only to evaluate the watershed assessment.

Mr. PETERS. So no one has a sense of the timing of when they would like to proceed with this project?

Mr. KAVANAUGH. I think they have stated on their website and other places that they are shooting for the end of this year, but I am not privy to the internal workings of the company.

Mr. PETERS. So we don't know when the company itself might be ready to prepare an EIS?

Mr. KAVANAUGH. Well, not precisely, but I mean, they spent a substantial amount of money, I believe, in the hundreds of millions to do baseline studies, so I would assume they are ready, more or less, but I don't know the details.

Mr. PETERS. I mean, I just--I am new here, not even 7 months, but it does seem to me like we are--there is a basic

question here about when is this going to come up because if it is going to come up this year that they are going to file this permit request and have to prepare the environmental documentation, which is what I used to do in a past life, we could run these processes concurrently, agree on what the scientific protocols were and so forth and there wouldn't be this pressure that some people feel to get things moving now. So wouldn't it be helpful for us to know kind of what the company's intention was?

Mr. KAVANAUGH. Absolutely.

Mr. PETERS. So has anyone asked them? I mean, here we are at a congressional hearing, right? That was a simple question. The company could tell us. Maybe there is someone from the company here. When do they want to start this process up? If they are going to be filing their permit request in three months, say, I would think it would be more than reasonable to say, okay, let us do this concurrently in 3 months, but it is just a simple, basic piece of, you know, a multimillion-dollar or hundred-million-dollar project that no one is answering. So that to me would give ammunition to the people who say well, we have to do it now because the company is not giving us information about when they actually want to do it.

Mr. KAVANAUGH. Well, Congressman, that is a very good point. Again, I was retained by Northern Dynasty to

undertake an assessment of the EPA study, the EPA report, but I am not an employee of the company. So I am not aware of the precise details but I am sure that could be figured out, and I think your approach is a valid one.

Mr. PETERS. You know, in my old world, I wasn't in Congress, I would just try to do things in ways that made more sense, but it does seem to me that if they would like to let us know that they are planning to do this soon, this might obviate the need for a big conflict and we could figure out a cooperative way to do this. This is my observation, and clearly you don't have the answer but I appreciate at your least addressing the question for me, Doctor.

Mr. KAVANAUGH. Sure.

Mr. PETERS. Thank you, Mr. Chairman. I yield back.

Chairman BROUN. Thank you, Mr. Peters. Now Ms. Bonamici, you are recognized for 5 minutes.

Ms. BONAMICI. Thank you very much, Mr. Chairman, for allowing me to participate in this important hearing. I appreciate it.

I would like to thank the witnesses for being here today. I represent the northwest part of the State of Oregon and so this is an issue that is very critical to the economic and environmental priorities of my constituents up and down the West Coast, but in Oregon, for example, many of my constituents have commercial fishing permits for Bristol Bay.

They travel there every summer to make a living. Still more work as fishing guides. They lead tours of recreational fishermen to the thriving ecosystem in Bristol Bay. According to a recent report by the University of Alaska, Anchorage's Institute of Social and Economic Research, as many as 2,000 Oregon jobs are supported by Bristol Bay salmon fisheries. So my constituents have made it clear to me that they are very concerned about the impact of a proposed mine on the ecosystem and on their livelihood, so it is important that we get the science right on this.

I want to ask you, Mr. Nastri, much has been made about the EPA assessing a hypothetical project. In your testimony, you indicated that while final details of the plan may diverge from the public documents filed so far, what won't change are the size, scope and location of the mine. So based on your experience, especially with EPA, how much more information would EPA have to have about a project that had been officially proposed compared to what has been already discovered about the Pebble Limited Partnership plans through public documents?

Mr. NASTRI. The key issue here is the fill-and-dredge permits, the 404 permits, and one of the key aspects of that is that the fisheries are protected, and under 404 requirements, you have to show unacceptable adverse harm. The physical dimensions of the mine itself will create

significant impacts to the ecological resources in terms of impacts to streams and so forth. So from that perspective, EPA has enough information to address the 404 question, and that is, are there unacceptable and adverse impacts, and if so, then the agency has a series of decisions that it can make with regards to how to address that.

Ms. BONAMICI. Thank you. And following up, how does the data that the EPA used in the assessment, the watershed assessment, compare to data that would be considered during a traditional NEPA process, which supporters of the mine proposal have said would be sufficient o protect the ecosystem?

Mr. NASTRI. Well, much of the data that is utilized in the watershed assessment would certainly also be utilized in the NEPA process, but again, the decision aspects of both processes are designed to inform policymakers, and the information certainly with regards to a 404(c) issue is certainly there, assuming that the watershed assessment is finalized.

Ms. BONAMICI. Thank you. And you described the--you discussed the Reilly Yocum report in your testimony, which describes the actions that the EPA could prohibit under its 404(c) authority including discharge of dredge material into salmon habitat, discharge of dredge material if it does not meet testing requirements showing that it is not a threat to

salmon, aquatic life, and the discharge of dredge material that requires treatment in perpetuity. So would the performance standards in the report permit the Pebble Limited Partnership to file for a permit if it was able to engineer a solution to meet those requirements?

Mr. NASTRI. Absolutely.

Ms. BONAMICI. Thank you.

And I wanted to talk briefly with my remaining time about, apparently, Mr. McGroarty, earlier this year, you wrote an opinion piece in the Wall Street Journal in which you described the United States as being tied with Papua, New Guinea, for last place in the time it takes to get a permit for a new mine, and I suspect that perhaps the history of what happened in New Guinea is a call to our government to slow down, and I hope the United States does move carefully on this because we don't want to repeat the mistakes that were made there, and I just read a quote from the journal Organization and Environment where they detailed the destruction that was left and the operation of the, I think it is Panguna mine. ''Thousands of acres of rainforest were cut down and billions of tons of mine waste were dumped into local rivers and their surrounding oceans, degrading drinking water quality and destroying fisheries and local fishing economies. Mine pollution may also have increased death rates on the island, especially among children. In addition,

villagers living on or near the mine property were forcibly removed from the area to make way for the mine.'' And I cite this as an example of the environmental damage that can occur in mining operations. I point out that it is my understanding that this operation in New Guinea was managed by one of the entities involved with this proposed Pebble mine in Bristol Bay, and I trust that all of you will agree that we don't want this to happen in our country. Anybody want to agree with that?

Mr. NASTRI. We agree. I agree.

Mr. KAVANAUGH. Well, I certainly agree, and I think--but the point here again is that you are talking about a mining situation under strict regulatory control in Alaska. You are using examples of systems that were installed under poor regulatory oversight, and the example that I mentioned, the 135 case studies, all of those were not relevant to the modern engineering design of a treatment, storage and disposal facility. Another example of the exaggerations that we keep hearing, 11 million tons of ore that are all acid generating. In fact, only 17 percent of the material is estimated to be acid generating as documented in the report, in the assessment. Eighty-three percent is not acid-generating materials. So I think the problem that keeps coming up on this project is, again, exaggerating the probability of failure and exaggerating the consequences of

those failures.

Ms. BONAMICI. Thank you. I see my time is expired. Thank you, Mr. Chairman.

Chairman BROUN. Mr. Schweikert, you are recognized for 5 minutes.

Mr. SCHWEIKERT. Thank you, Mr. Chairman, and I apologize to you and the Committee and the witnesses for my tardiness and so you may--I may be asking you something that you have already spoken about but it will be helpful for me.

Being from Arizona, you know, I have grown up around a lot of both underground and pit and other types of ore extraction. My understanding is, even what I seen in the southwest United States, that both the technology and the mechanics, everything from SX to everything else out there, have dramatically in the last couple decades, and I would love to start from--is it Mr. Rothschild--and work my way down. Tell me how mechanically and technologically both from an impact mitigation for a large mine would look different today than it might have four decades ago?

Mr. ROTHSCHILD. Well, I can tell you that I am not the mining expert, I am the lawyer, but I would tell you that that is exactly what the EIS process is intended to identify is those changes and the impacts. I will defer to the scientific experts on the panel to answer your question specifically.

Mr. KAVANAUGH. Well, Congressman, I am the only engineer on this panel so I can give you a few examples if that would be sufficient, but you certainly should take a look at written testimony that outlines a number of the areas where mitigation measures would in fact be undertaken. But let me just focus on a couple of examples. The tailings storage facility is a large facility, and certainly, any kind of failure there would have dramatic consequences. So those systems have to be designed to minimize the probability of failure. They are designed with an appropriate safety factor. They are designed with a downstream method, which has been proven to be successful. Many of the failures in the 135 case studies that is documented in the assessment are based on other ways of designing the dams and many of those failed because they were improperly designed. So--

Mr. SCHWEIKERT. And to that--

Mr. KAVANAUGH. Just to finish my statement there, the point being that you can design a tailings storage facility with appropriate safety factors so that the probability of a failure is very, very low.

Mr. SCHWEIKERT. And Doctor, back to the nature, the focus of my question is, tell me on that engineering, how would you--would you be engineering it differently today than you might 40 years ago--

Mr. KAVANAUGH. Absolutely.

Mr. SCHWEIKERT. --with the materials, the linings? Walk me through a couple of those, both materials, engineering, design, technology changes that have happened in those decades.

Mr. KAVANAUGH. Well, that is fairly comprehensive so I will give it a stab. Again--

Mr. SCHWEIKERT. You have got 2 whole minutes.

Mr. KAVANAUGH. I have got 2 minutes? Again, with the TSF, it would be designed in a manner that has been proven to be effective at withstanding seismic threats, overtopping, slope stability, all of the modes of failure that geotechnical engineers are fully aware of these days. The whole 135 case studies is intended to be lessons learned. You don't do it the way that has failed in the past. So with respect to that particular engineering component, again, it would be designed with appropriate safety factors to meet a permit requirement for a failure probability, one in a million, for example.

With respect to all the water treatment and wastewater treatment facilities, they are all designed to have redundant systems. If there is a power failure, there is a way to assure that the system shuts down. There are diagnostic measurements that can monitor a system as detailed as you want with real-time measurements. That is in the water and wastewater management arena. One of the issues is the

containment of the acid drainage from the tailings. You can design that to be of sufficient capture to capture all of the acid-generated wastes. In the report, they estimated 50 percent would be lost. I think that is a poor assumption. Other components of the mine involve the pipelines. You can do double--you can do pipeline designs that are double-walled. All of these things, of course, can add to the cost but they can be done in a way that minimizes the probability of any releases.

Mr. SCHWEIKERT. Mr. Chairman, in the last 40 seconds, Mr. Nastri, same sort of question.

Mr. NASTRI. As a former EPA--

Mr. SCHWEIKERT. And can you hit your button?

Mr. NASTRI. As a former Regional Administrator who was involved in both the cleanup of legacy mines as well as the permitting of new mines, I think I have a good grasp on the issue. I am sure that any mine in its time said they were going to meet the requirements, that they were going to do the absolute best and that nothing would be the case. Unfortunately, in the Southwest, we have the greatest concentration of Superfund mine sites that are being cleaned up. There are a number of--

Mr. SCHWEIKERT. But Mr. Nastri, to that point, the legacy and time frame of those, having some education in this area--

Mr. NASTRI. Sure.

Mr. SCHWEIKERT. --are almost all 50-year-old from their original permitting dates, and the design and manufacturing and engineering and mitigation that you would permit a new mine today would look dramatically different in your requirements, correct?

Mr. NASTRI. Absolutely, they would look different. However, accidents happen. Things happen that don't--

Mr. SCHWEIKERT. And that is why now in your mechanics and your rules you do the layers of redundancy that have been modeled from previous experiences, correct?

Mr. NASTRI. You do do that, but they are not foolproof and they are not--

Mr. SCHWEIKERT. Well, also, you know, life isn't foolproof but at some point you play the statistical part of your tale, and sorry, I am way over time, but Mr. Chairman, thank you for your patience.

Chairman BROUN. We will start a second round of questions, and try to get through as far as we can go. We have votes about 2:30, 2:35.

Mr. Nastri, back to the question that Mr. Maffei gave you. All I heard was economic issues, not environmental harm, and if you can in your written statement or answering the written questions, if you can show us what you mean by environmental harm? I have never heard anything from you

regarding that.

But let us go to Mr. Rothschild with that same question. Would allowing the Pebble project to present a plan to go through the NEPA permitting process result in any environmental harm?

Mr. ROTHSCHILD. No.

Chairman BROUN. Yes or no?

Mr. ROTHSCHILD. No, Mr. Chairman.

Chairman BROUN. Okay. Dr. Kavanaugh?

Mr. KAVANAUGH. Not that I am aware of.

Chairman BROUN. Okay. Dr. Kavanaugh, one argument made by people opposed to the mine in Bristol Bay is that Geosyntec has hired--was hiring by one of the mining companies exploring mining options in Bristol Bay so naturally raises concerns shared by the mining company. Is that a fair characterization? Would Geosyntec's report have been different had the company been retained by an environmental group or organization opposed to the mining in Bristol Bay?

Mr. KAVANAUGH. Well, I appreciate that question, Mr. Chairman. Geosyntec has been in business since 1983. We have a thousand staff. We consider ourselves independent environmental consultants. Our fee was paid by Northern Dynasty but we have no commercial interest in the outcome. We are not advocating one way or another. We are simply

commenting on the scientific and technical credibility of a document. I would make the same comments were I retained by an environmental organization with respect to the limitations of the assessment that has been prepared.

Chairman BROUN. So if the--I take it that if all these groups that are opposed to the mine had hired Geosyntec, you would have--the results would have been the same? Is that what you are telling us?

Mr. KAVANAUGH. Yes, it would.

Chairman BROUN. Thank you.

Mr. Rothschild, what role do avoidance and mitigation impacts play in the mining process--permit process, mining permit process?

Mr. ROTHSCHILD. Under the Clean Water Act permitting process, a permit applicant is required to submit all practicable avoidance minimization and mitigation measures, and so there is a detailed analysis about what can be done practicably in every permit case to ensure that the impacts are avoided, minimized and mitigated to the greatest extent.

Chairman BROUN. Okay. Dr. Kavanaugh, following up on Mr. Rothschild's response, what is your assessment of the role of avoidance and mitigation of impacts in either the first or second draft of EPA's watershed assessment?

Mr. KAVANAUGH. Well, in the second draft, they included greater discussion about mitigation in the document but they

did not incorporate, in my opinion, mitigation into minimizing or discussing the probability of failure. They still retain, for example, four examples of tailings storage facilities' failures, four case studies, if you will, that were not--that are not relevant to a modern mine. They were based on well-known causes of failure, and those failures are again lessons learned.

One of the mistakes, in my view, that permeates the report is the use of historical information to predict what may occur in the future, and I understand the limitations of making these predictions into the future, and it is not a straightforward analysis. But to give equal weight to worst-case scenarios leads to, in my opinion, not a credible risk analysis.

Chairman BROUN. Dr. Kavanaugh, EPA described this assessment as a watershed assessment in 2012. Subsequently, the revised version of the document has been referred to as an ecological risk assessment and an environmental assessment. Is there a difference between a watershed assessment and ecological risk assessment and an environmental assessment?

Mr. KAVANAUGH. Well, I think there is some confusion as to what exactly the nature of this document is. It is not really an ecological risk assessment because it doesn't quantify a lot of ecological risks. It talks about the

potential risks in a qualitative way. It also is not really a risk analysis, in my view, because of the limitations that I have already mentioned, and it is not an Environmental Impact Statement because it is a hypothetical mine scenario. So I honestly don't exactly know what kind of a document it is. It is a unique document, and it does not follow any guidance, principles related to processes that have been identified by EPA, for example, in ecological risk assessment.

Chairman BROUN. Very good. My time is expired. Mr. Maffei, you are recognized for 5 minutes.

Mr. MAFFEI. Thank you, again, Mr. Chairman.

Mr. Rothschild, if the EPA decided to move forward with 404(c) action in Bristol Bay, does it have the authority to do so strictly speaking as a legal matter?

Mr. ROTHSCHILD. Well, with the caveat that I wasn't asked to talk about 404(c), I can tell you that EPA has not historically issued a preemptive 404(c) veto so it is not exactly clear what it would need to do to prepare a record for that. I do note that as early as this morning, Administrator McCarthy was quoted in the Washington Post as saying that with regard to the mine, ''Any act that EPA would take would be carefully considered. There are significant natural resources in that area along with significant economic resources. We have got to get that balance right.''

It is that balance that really NEPA is intended to inform the decision making.

Mr. MAFFEI. Thank you. That is helpful.

I want to quote from a letter by Senator Lisa Mikulski on this. She wrote on July 1, 2013, that at least as far back as November 3, 2004, Northern Dynasty Minerals asserted that the submission of permit applications was imminent, and then she goes on to describe how this occurred again in 2005 and 2006, 2008, 2009, 2010 right up to most recently in June of 2013. The PLP representative said they hope to have a project to take into permitting this year, and she says, ''By failing to take the next step, by failing to decide whether to formally describe the project and seek permits on it, PLP has created a vacuum that EPA has now filled.''

Mr. Nastri, is this--does this context affect your assessment of the EPA's responsibilities here, the context of all of these times that the companies have said they are going to seek a permit and then they pull back?

Mr. NASTRI. Well, the agency is being responsive to those who actually requested they get involved, those being the Alaska Natives, the residents, the commercial and sport fishermen and a whole host of other groups. So I guess the lack of submission of a timely permit application that created the uncertainty, the confusion and the anxiety has certainly contributed to where we are today. Had that been

done, I am sure we would not be here today. But the fact of the matter is, for EPA to respond to various residents and groups and so forth, this is the way that they respond. They have to look at the issue.

Mr. MAFFEI. I would like to note that there are some representatives of the native tribes that requested the EPA look into this here today, and I am honored that they would make the trip.

Just to elaborate a little bit further on that, Mr. Nastri, so the fact that it may be fairly unprecedented if the EPA were to go ahead with 404(c) action but do you feel that this is a somewhat unprecedented situation with a company postponing, you know, bringing to the brink that they are going to have a permit and then continuing to postpone it time and time again?

Mr. NASTRI. Well, I think the area and the resource is unprecedented in terms of the value and its importance both from an economic perspective, from a jobs perspective, and there is the cultural importance, and so in that light, I think it is important to address and provide certainty to those people. But as far as, you know, people have said that this is a precedent, you know, as was said earlier, hundreds of thousands of permit applications for fill-and-dredge permits, the agency has only taken 13 times, and the issue of being proactive, I mean, here we are in the world's greatest

salmon fishery left. If we are not going to be careful and protective of this, when we would be? And so that is why it is so important to address this issue, provide that certainty now to everybody involved.

Mr. MAFFEI. Well said, sir, and I will yield back the balance of my time.

Chairman BROUN. Thank you, Mr. Maffei. Mr. Schweikert, you are recognized for 5 minutes.

Mr. SCHWEIKERT. Thank you, Mr. Chairman. And Dan, help me with the last name so I don't screw it up.

Mr. MCGROARTY. McGroarty.

Mr. SCHWEIKERT. McGroarty? Okay. I was going to get it. I wanted to make sure I was being fair in my chain because part of the discussion we have also had in our office about this is not only some of the abnormalities we think have happened, sort of the pattern of, you know, heading towards NEPA, heading towards this and people trying to cut off and those things but just also understanding, are we also making sure--and this is from both those who want to, you know, extract the materials to the communities around there to everyone with some type of interest, an understanding of current state of technology, current state of the mechanics, current state of rule sets so if you are going to set up the rules on how this is going to happen, if it is to happen, you know, that we have learned from past mistakes, we have

learned from things. I have learned in Arizona and how radically different at least from what I see in the Southwest of a new facility would be designed and managed.

I know you spent some time sort of on the information side. How are we doing in disseminating to all levels what the new technologies are?

Mr. MCGROARTY. I think that is precisely the kind of argument for having the NEPA process and having a detailed EIS because it is a kind of discovery, and what it means, instead of having a hypothetical construct is, there is a particular plan with particular technologies, particular best practices in a particular place and that experts on all sides of those questions have the opportunity to bring their information to bear. It is very much like Mr. Rothschild said about that process. That process is in place and it takes us very far downfield to making a good decision, a scientifically informed decision. In my oral remarks today, it is interesting that, you know, I am quoting from National Resource Defense Council in praise of the NEPA system, which I think is an accurate statement, and so I don't understand why we would want that or possibly circumvent or prevent that when it is precisely the kind of process that would reveal those answers and would air those questions that you have raised here.

Mr. SCHWEIKERT. Tell me that I am not looking at a

situation here we have sort of a regulatory process to review mechanics and when certain parties are fearful they may not get what they want politically, that they are trying to find ways to head off that process.

Mr. MCGROARTY. I can't put my--

Mr. SCHWEIKERT. Or would that be just too cynical to say such a thing?

Mr. MCGROARTY. I can't put myself inside the mind of, you know, folks arguing that. I do say in the press there is an awful lot of--you know, the press often reports that this is a--that the watershed assessment would be a tool to stop the process. That is all I can tell you.

Mr. SCHWEIKERT. Okay. Mr. Rothschild, you have expertise in the NEPA process?

Mr. ROTHSCHILD. Yes.

Mr. SCHWEIKERT. Tell me what you think works and doesn't work.

Mr. ROTHSCHILD. I think that NEPA process as a whole works. It analyzes the alternatives to and the impacts of a proposed project, and that is certainly something that is missing in this assessment regardless is, every NEPA assessment needs to look at the alternative of not doing anything. It is called the no-action alternative. And that companies with that analysis is the impacts that would result from not doing anything, the impact, the environmental, the

economic impacts, some of the impacts that Mr. McGroarty was testifying to earlier with regard to the need for these metals, and so I think the NEPA process, while it has his kinks, is fairly successful at looking at impacts and alternatives.

Mr. SCHWEIKERT. Okay. Mr. Chairman, you know, that gets me where I needed to be informationally, so I yield back.

Chairman BROUN. Okay. Very good, Mr. Schweikert. I understand I have a unanimous consent request.

Mr. MAFFEI. Mr. Chairman, I ask unanimous consent that Mr. Kilmer of the State of Washington be allowed to participate in the Subcommittee hearing. He is a member of the full Committee but not the Subcommittee.

Chairman BROUN. Hearing no objections, so ordered.

Ms. Bonamici, you are recognized for 5 minutes.

Ms. BONAMICI. Thank you, Mr. Chairman, and I will just take a couple minutes. I wanted to recognize that again there are people here from some of the tribes. They have come all this way, and I appreciate their presence.

It is my understanding that Bristol Bay is home to 25 federally recognized tribal governments, and I wanted to talk a little bit about the public participation part of the assessment. Mr. Nastri, is it unusual for there to be two public comment periods? Because it is my understanding that

during the first phase, there were more than 200,000 public comments, and during the second phase, 877,000 public comments came in. So can you talk a little bit about the effort to involve the public in this assessment process, especially with the federally recognized tribes?

Mr. NASTRI. There has been extensive outreach during this entire process and it was at every stage of the process from helping to define what the study would be, helping to select the charges that would be subject to peer review, to who peer reviewers could be. There was extensive outreach with regards to the one or two peer reviews. In my experience, there typically was one peer-review period and then the agency would go ahead and finalize and release. I think in an abundance of caution, the agency wanted to make sure that there was as much outreach as possible and to solicit as much input as possible from all of those, and it is continuing to do so, and right now they had recently closed that second comment period on the second revision that was released, and so they are in the process of compiling and reviewing all of the comments that are submitted, and I am sure that many of the issues that were discussed today will be addressed once that watershed assessment is finalized and released.

Ms. BONAMICI. Thank you. And can you comment briefly on the efforts that have been made to work with the federally

recognized tribes in the Bristol Bay area?

Mr. NASTRI. There have been a number of communications directly with members of the tribal villages. Previously, there was visits to the actual area. I know that there were a number of visits. The Administrator herself, Administrator Jackson, had the chance to visit. EPA staff had the chance to actually fly over the proposed site, look at some of the areas that would be impacted by the potential development of the Pebble deposit. So there was an extensive ability for the actual staff of the agency to see firsthand what it is that was being discussed. I myself also had the opportunity to visit a number of those villages and see the challenge that they have. So I think that in terms of the agency itself providing the opportunity for engagement, they specifically formed a group to deal with the tribal entities and so forth. They have had numerous opportunities for public input, and I would say that it is really quite extensive.

Ms. BONAMICI. Thank you very much, and I yield back the remaining time. Thank you, Mr. Chairman.

Chairman BROUN. Thank you, Ms. Bonamici. Mr. Kilmer, you are recognized for 5 minutes. Do you think you need all five?

Mr. KILMER. I don't think I will.

Chairman BROUN. Okay.

Mr. KILMER. Thank you, Mr. Chairman, and thank you for allowing me to participate in this important hearing. I would like to thank all the witnesses for traveling here today as well.

As mentioned, the Bristol Bay watershed is the world's largest sockeye salmon fishery, not only in existence but flourishing, and as a representative from Washington State, I have seen the detrimental effects of a struggling salmon population and how it can affect all stakeholders from fisherman to our tribal communities. In Washington State, we can all agree that the viability of our fisheries, whether in the State of Washington or in Alaska, are a key economic driver and a part of our cultural heritage, and healthy fisheries create jobs. Bristol Bay watershed supports over 14,000 jobs from Alaska to Maine and at least 5,000 Washington State jobs rely on the Bristol Bay sockeye fishery including a good number of my constituents.

In examining the proposal, I have serious concerns over the environmental effects of building this type of mine right on top of the largest sockeye run in the world. In fact, according to Pebble's own documents on file at the SEC, at least 80 miles of sockeye spawning streams would be destroyed during the construction of the mine. That is in addition to the lasting impacts that the toxic tailing pools would have on salmon. I hear the Pebble supporters say that the EPA

should just wait for a permit application, and I guess I have got a few questions for Mr. Nastri.

First, in your opinion, why is it so important that EPA get this work done sooner than that? Second, I hear from a lot of commercial and sports fishermen in my district who oppose the Pebble mine and support the EPA's process. In the Bristol Bay region, what do residents think about the EPA process and what do they think about the mine? And then finally, you know, I have a number of tribes in my district and I understand the importance of access to fishing grounds for our tribal communities. Worst-case scenario or let us say medium-case scenario we have a leakage from the toxic tailing pools. What happens to subsistence fishers in the region? Are there other streams nearby that can sustain them? In your view, is the EPA doing enough to make sure subsistence fishers in the Bristol Bay region have a voice during the process? Thank you.

Mr. NASTRI. Thank you. You asked a lot of questions, and hopefully I will be able to answer them all, but if I forget one, please remind me.

With regards to the level of support, as I mentioned earlier, over 75 percent of the comments that were generated with regards to the watershed assessment were in support of, and within Bristol Bay, over 95 percent of the commenters supported EPA's watershed assessment.

With regard to the subsistence aspect, there was a tremendous amount of outreach on the cultural and subsistence issue, and in fact, there were comments that were submitted by various villages that talk about the potential harm to a subsistence way of life and to a cultural identity should the salmon be impacted in a way that is feared. And so there is a tremendous amount of effort, both in terms of addressing the subsistence aspect. There is a tremendous level of support for EPA and its watershed assessment. And I am sorry, the very first portion of your question?

Mr. KILMER. In your opinion, why is it so important that the EPA get this work done sooner than waiting for a permit application?

Mr. NASTRI. So right now what we have and what really prompted the request to EPA is uncertainty, and as Senator Mikulski said, that uncertainty has caused anxiety and frustration within the communities. And that has a direct impact on the economic well-being of the area. We have heard from a number of groups and organizations that said they will not invest in the area because they don't know what the outcome is. There is also the ongoing threat of stigma, stigma in terms of, are these fish going to be something that is really valuable. Right now, the value of this fishery is tremendous, and so providing and addressing a response that addresses the uncertainty is extremely important, and not

only are there the economic aspects, you know, the 14,000 jobs, the 1.5 billion contribution, but you have the social impacts as well, and I am sure that the village elders that are here today could share with you stories about what it is doing to their youth. I have had the chance to talk to some of those youth, and they say that this uncertainty has impacted them greatly. And so providing the certainty not only to all the people that are involved that rely on the fishery, that live on the fishery, but to everybody so that they know what needs to be done and how we can address this and move forward and continue to have that very viable and healthy fishery and economy.

Mr. KILMER. Thank you, Mr. Chairman. I yield back.

Chairman BROUN. Thank you, Mr. Kilmer.

Before I adjourn this hearing, I want to make a couple of points. As I stated in my opening statement, I am an avid hunter, fisherman and conservationist. In fact, it was those issues that started my political activism. I enjoy the great outdoors and strive to protect our natural resources so future generations may also enjoy the benefits that they provide.

I have serious questions about how a mine can coexist with fish in Bristol Bay, but I have reservations about EPA's action in regard to potential Pebble mine. I cannot support actions by a federal agency that disregards laws that already

exist that provide a level playing field for both industry and environmentalists alike. We must be a Nation ruled by law, not ruled by decision of man or woman.

If the Administration wants to keep its promise of transparency and accountability, it should start with projects like the Pebble mine in Bristol Bay and allow the NEPA process to occur once an actual plan is submitted. If it turns out a mine cannot be developed without endangering the salmon in Alaska, then the EPA has the authority to deny the requisite permits, and should, but it will have done so by following the due process instead of setting a costly and chilling precedent that may send more jobs out of the United States to countries whose mining laws have little regard for the environment or their citizens. Following our system of existing laws and regulations would also help alleviate the uncertainty among industry, who right now are wondering which rules will prevail, the laws as we know them or the whims of an agency an Administration that apparently believes the ends justify the means.

My position has always been, if the Pebble mien will harm the fisheries and environment, as some believe, it should not be allowed. We must allow due process under the law to find the facts. Laws and facts should drive the decision.

Again, I thank everyone for their participation in this

informative hearing today, and I suspect it won't be our last discussion on the topic. I have allowed every letter that I have gotten, no matter how much they have impugned my process and my reasons for holding this hearing. I have put them all in the record. We have to be a Nation governed by law and due process, and that is the whole reason for this hearing.

Now, members of the Committee may have additional questions for the witnesses, and we will ask you to respond to those in writing. The record will remain open for 2 weeks for additional comments and written questions from members.

The witnesses are excused. I thank you all for you all's presence. This hearing is adjourned.

[Whereupon, at 2:31 p.m., the Subcommittee was adjourned.]

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SPEAKER LISTING
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